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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/743,634	03/16/2001	Hans-Peter Burvenich	3268-0115P	5761

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HARNESS, DICKEY & PIERCE, P.L.C.
P.O.BOX 8910
RESTON, VA 20195

EXAMINER

MASINICK, MICHAEL D

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 11/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/743,634

Applicant(s)

BURVENICH ET AL.

Examiner

Michael D Masinick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/16/01, 5/22/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed April 6th, 2001 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because documents cited are not from the country of "Great Britain" as designated, but are from Germany. Documents are not in English and require a statement of relevance or an English translation. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3 and 9 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

4. Claims 3 and 9, dependant upon claim 1, state in part: "...and the continuous casting and rolling plant is controlled by the computing unit in accordance with the order determined." This phrase is found in independent claim 1, and is thus repetitive and unnecessarily confusing to the reader. This section of claims 3 and 9 should be eliminated.

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5. Claim 6, dependant upon claim 1, is likewise repetitive with regards to the plant vs. method of using the plant.

6. Examiner requests that all other claims be examined for repetitive statements and be amended accordingly.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,808,891 to Lee et al in view of U.S. Patent No. 5,222,192 to Shaefer.

9. Referring to claims 1 and 6, Lee shows a continuous casting and rolling plant, and a method of operating a continuous casting and rolling plant with a computing unit, including a plurality of slabs belonging to different production orders within sequences on the continuous casting and rolling plant ("Order Load", Abstract), comprising: determining the order of the slabs belonging to the production orders within the sequences with the computing unit, and controlling the continuous casting and rolling plant by the computing unit in accordance with the order determined (Col 6, lines 53-61).

10. Lee does not show that the order determination step is accomplished by using genetic algorithms.

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11. Shaefer shows the use of Genetic Algorithms as a problem solving technique where random optimization is needed (Abstract, Patent Subject).

12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the Genetic Algorithms of Shaefer in place of the optimization technique of Lee because genetic algorithms provide “extraordinarily quick discovery of early approximate solutions” (Shaefer, Col 3, lines 43-50). This substitution is also made for all inherent traits of genetic algorithms as are shown with relation to Shaefer below.

13. Referring to claim 2, Shaefer shows wherein at least one of a selection, a recombination, or a mutation is carried out by the genetic algorithm (“mutation”, Col 3, lines 27-34).

14. Examiner notes that these are all inherent functions of a Genetic Algorithm.

15. Referring to claims 3,4,7, 9, and 10, Shaefer shows wherein the order of the slabs belonging to the production orders within the sequences is determined with the computing unit by an event-oriented evaluation (Fig. 5 and Col 8, lines 62-65) according to the quality of the solutions.

16. Examiner notes that an evaluation according to quality step is inherent to the use of genetic algorithms.

17. Referring to claims 5, and 11-15, Shaefer shows where a starting solution, as a starting point, is determined by the computing unit (Col 2, lines 3-6).

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18. Examiner notes that creating a random starting point is inherent to all genetic algorithms and would inherently be selected by the computing unit.
19. Referring to claim 8, Lee shows wherein the continuous casting and rolling plant is a thin-slab continuous casting and rolling plant ("Rolled to desired thickness", Col 2, lines 22-28).
20. Referring to claims 16-19, Lee shows a continuous casting and rolling plant wherein the plurality of slabs which belong to different production orders are produced within sequences on the continuous casting and rolling plant ("Order Load", Abstract), wherein the computing unit determines the order of the slabs belonging to the production orders within the sequences (Col 6, lines 53-61).
21. Lee does not show that the order determination step is accomplished by using genetic algorithms.
22. Shaefer shows the use of Genetic Algorithms as a problem solving technique where random optimization is needed (Abstract, Patent Subject).
23. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the Genetic Algorithms of Shaefer in place of the optimization technique of Lee because genetic algorithms provide "extraordinarily quick discovery of early approximate solutions" (Shaefer, Col 3, lines 43-50).

Conclusion

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24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and the state of the art at the time of invention.

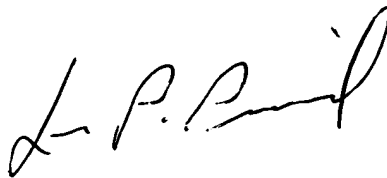
25. Specifically important is Japanese Patent 09094646 A of April 8, 1997 that specifically shows genetic algorithms being used in the manufacturing and cutting of slabs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D Masinick whose telephone number is (703) 305-7738. The examiner can normally be reached on Mon-Fri, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (703) 308-0538. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7239 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

mdm
October 25, 2002

A handwritten signature in black ink, appearing to read "L. P. Picard", written in a cursive style.

**LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**